

SAFETY SHUTDOWN SYSTEM FOR A WDM FIBER OPTIC COMMUNICATIONS NETWORK

ABSTRACT OF THE DISCLOSURE

A fiber optic communications network includes multiple transmitters and multiple receivers connected by an optical WDM transmission link, the receivers having output channels for providing signals to terminal devices, each receiver including a demodulator to detect and recover a received signal, and the network includes at least one optical amplifier having a shutdown input for actuating the safety shut down of the network upon detecting a disconnect in the transmission line. The system includes circuitry connected to the output of each of the demodulators for sensing the presence of a valid signal and for determining whether a predetermined number of valid signals are present at the demodulators. If the number of valid signals detected is less than the predetermined majority number, the safety shutdown function is actuated.